

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of claims:

Claims 1-22 (canceled).

Claim 23 (new): A method for transmitting control parameters (KN, PN, RV) on a physical channel (PK) between a mobile radio device and a base station in a cellular network, comprising:

including with the control parameters (KN, PN, RV) a packet number (PN) for identifying a data packet; and

source coding the packet number (PN) at least together with a further control parameter (KN, RV) for the transmission,

wherein the control parameters (KN, PN, PV) are used for controlling a packet-oriented data transmission between the mobile radio device and the base station.

Claim 24 (new): The method according to claim 23, further comprising:

implementing by a temporal distribution of the same physical channel (PK), a plurality of different time channels (K1, ..., K6) available for sending data packets; and

re-transmitting a data packets on a time channel (K1, ..., K6) using a transmitting device in each instance, until the transmitting device receives a confirmation signal (ACK) from a receiving device.

Claim 25 (new): The method according to claim 24, further comprising including with at least one further control parameter (KN), the channel number (KN) of the time channel (K1, ..., K6), in which the data packet in question is sent.

Claim 26 (new): The method according to claim 24, further comprising using so many different time channels (K1, K2, K3) as a maximum

that the sum of the transmission time intervals (TTI) of the available time channels (K1, K2, K3) covers a round-trip time (T_{RT}), at the end of which a re-transmission can take place at the earliest on a specific time channel (K1, K2, K3) after a previous transmission.

Claim 27 (new): The method according to claim 24, wherein a number of re-transmissions of a data packet are superimposed to decode a data packet.

Claim 28 (new): The method according to claim 27, wherein an incremental redundancy method is used during the data transmission and a least one further control parameter (RV) includes a redundancy version indicator (RV).

Claim 29 (new): The method according to claim 24, wherein the data transmission takes place by means of a multi-channel HARQ transmission method (KN, PN, RV) and at least one further control parameter includes an HARQ parameter.

Claim 30 (new): The method according to claim 24, wherein different numbers of packet numbers (p_i) are assigned to different time channels (K1, ..., K6), which are available for identifying a data packet on the time channel (K1, ..., K6) in question.

Claim 31 (new): The method according to claim 28, wherein different numbers of redundancy version indicators (RV) are assigned to different time channels (K1, ..., K6), which are available for signaling the redundancy version of a data packet transmission on the time channel (K1, ..., K6) in question.

Claim 32 (new): The method according to claim 24, wherein the number of packet numbers (p_i) and/or number of redundancy version indicators (RV) of at least one of the time channels (K1, ..., K6) is/are variable.

Claim 33 (new): The method according to claim 32, wherein the number of redundancy version indicators (RV) of the time channel in question is modified according to a predefined sequence at specific time intervals.

Claim 34 (new): The method according to claim 24, wherein the number of packet numbers (p_i) and/or number of redundancy version indicators (RV) of at least one of the time channels (K₁, ..., K₆) is/are selected in each instance as a function of the current transmission situation.

Claim 35 (new): The method according to claim 23, wherein transmission resources are allocated to a specific transmitting device taking into account the number of time channels (K₁, ..., K₆) used by the device in question and/or the numbers of packet numbers (p_i) and/or numbers (N_{RV}) of the redundancy version indicators (RV) of the different time channels (K₁, ..., K₆) of the device in question.

Claim 36 (new): The method according to claim 30, wherein during selection of a time channel (K₁, ..., K₆) for a pending transmission of a data packet, the time channels (K₁, ..., K₆) are prioritized according to their numbers of packet numbers (p_i).

Claim 37 (new): The method according to claim 24, wherein a packet number distribution function (P), which defines the numbers of packet numbers (p_i) assigned to the individual time channels (K₁, ..., K₆), is a monotonously increasing or monotonously decreasing function in respect of the channel numbers (KN) of the available time channels (K₁, ..., K₆).

Claim 38 (new): The method according to claim 24, wherein a time channel (K₁, ..., K₆) is selected for a pending transmission of a data packet according to a specific selection rule, taking into account when different combinations of channel numbers (KN) and packet numbers (PN) were last used.

Claim 39 (new): The method according to claim 24, wherein a time channel (K1, ..., K6) is selected for a pending transmission of a data packet taking into account temporal information relating to transmissions to date on the different time channels (K1, ..., K6).

Claim 40 (new): The method according to claim 39, wherein a time channel (K1, ..., K6) is selected for a pending transmission of a data packet taking into account the use times to date of the different time channels (K1, ..., K6).

Claim 41 (new): A mobile radio device, comprising:
means for transmitting a plurality of control parameters (KN, PN, RV) on a physical channel (PK) from the mobile radio device to a base station in a cellular network, wherein the control parameters (KN, PN, RV) are used for controlling a packet-oriented data transmission from the mobile radio device to the base station; and

a source-coding device for source-coding the control parameters (KN, PN, RV) before transmission, the control parameters (KN, PN, RV) including a packet number (PN) for identifying a data packet, wherein the coding device is configured such that the packet number (PN) is source-coded at least together with a further control parameter (KN, RV) for the transmission.

Claim 42 (new): A base station, comprising:
means for transmitting control parameters (KN, PN, RV) on a physical channel (PK) from the base station to a mobile radio device in a cellular network for controlling a packet-oriented data transmission from the mobile radio device to the base station; and
a source-coding device for source-coding the control parameters (KN, PN, RV) before transmission, with the control parameters (KN, PN, RV) including a packet number (PN) for identifying a data packet, wherein the coding device is configured such that the packet number (PN) is source-coded at least together with a further control parameter (KN, RV) for the transmission.

Claim 43 (new): A mobile radio device, comprising:
means for receiving control parameters (KN, PN, RV) on a physical channel (PK) from a base station to the mobile radio device in a cellular network for controlling a packet-oriented data transmission from the base station to the mobile radio device; and
a source-decoding device for source-decoding the control parameters (KN, PN, RV) with the control parameters (KN, PN, RV) including a packet number (PN) for identifying a data packet, wherein the decoding device is configured such that the packet number (PN) is source-decoded at least together with a further control parameter (KN, RV).

Claim 44 (New): A base station, comprising:
means for receiving control parameters (KN, PN, RV) on a physical channel (PK) from a base station to the mobile radio device in a cellular network for controlling a packet-oriented data transmission from a mobile radio device to the base station for controlling a packet-oriented data transmission from the mobile radio device to the base station; and
a source-decoding device for source-decoding the control parameters (KN, PN, RV), with the control parameters (KN, PN, RV) including a packet number (PN) for identifying a data packet, wherein the decoding device is configured such that the packet number (PN) is source-decoded at least together with a further control parameter (KN, RV).